

# SUPPOSED ENCEPHALOID TESTICLE: HERMAPHRODISM.

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WITH A WOOD-CUT.

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THOMAS MARTIN, 21 years of age, applied to me in April, 1859, on account of a great enlargement of what appeared to be the right testicle. His external appearance was that of a young working Irishman. The beard was full, strong, and black; the larynx was of the ordinary size, and the voice masculine; the shoulders were broader than the hips; the muscles were well developed; no fat; height sixty-five inches, of which thirty-three were above the pubis, and thirty-two below.

His own history of the case was as follows: Early in life he lost, or had removed, the left testicle, but could give no particulars of it. The right testicle was greatly enlarged, measuring thirteen inches in circumference, seven and three-quarters in length, egg shaped, and it extended nearly two-thirds of the distance from the pubis to the knee. It was excessively tense, hard, and seemed too heavy to be supposed a hydrocele, although the great evenness of its surface would seem to make such a supposition probable. Some very large veins ran over its surface under the skin. The spermatic cord seemed well defined above the tumour, though a little harder than natural. He complained of considerable pain in the back and loins, which was attributed to the dragging weight upon these parts. The pain in the testicle itself was not excessive. The testicle had been, he says, of normal size till about a year since, when he received a severe kick upon it. After the first acute symptoms had subsided, it then commenced to swell slowly, but within the last month it had increased very rapidly. The sexual feelings and power of erection continued natural till about six weeks ago,

and since then they have completely disappeared. He has never had sexual intercourse, and there is some doubt whether he ever had seminal emissions. About a month since, both breasts began to swell and become painful, and upon examination I found them to be of the size of those of a young female; the glandular structure could be distinctly felt, and the disk was about four inches in diameter. No fluid issued from them on pressure. I could not learn from him whether they had previously been larger than natural, but the present increased size seemed to have corresponded in time with the loss of sexual desire. He stated that his health was failing, he had lost his appetite, and was desirous of an operation to relieve him from suffering.

Being friendless, I advised this patient to enter the Massachusetts General Hospital, where the testicle was removed on Wednesday, April 13th, and the cord tied *en masse* near the abdominal ring, some dissection being necessary in order to reach the cord above the disease. Previous to the operation, he had been excessively diffident about having the genital organs examined, and at this time the following appearances were first remarked. The glans penis appeared normal but imperforate; the body of the penis was from two to three inches in length. Commencing about an inch from the glans and extending to within two inches of the anus, was a fissure having on each side two flaps of delicate epithelium, exactly resembling the nymphæ, which, being separated, presented, as it were, the external organs of the female. At the lower part of this fissure commenced apparently the urethra, and an instrument being introduced about three inches, water escaped freely. External to the fissure, the skin was thin and delicate, like that in the neighbourhood of the female organs of generation. The pubis was very fully covered with hair, which was shaved to facilitate the dressing after the operation. Dr. Dyer, house-surgeon of the Hospital, at my request took a cast of the breasts, their appearance was so unusual. My inquiries would have been much more particular in regard to his previous history, and especially as to anything resembling the menstrual discharge, if I had had the slightest suspicion of the subsequent manifestations.

The day after the operation he complained a great deal of pain in the abdomen and much fever, also of thirst, which was partly attributed to the ether administered. The febrile action gradually increased from day to day, the swelling and pain in the abdomen, however, subsiding until his death, which took place on the seventh day from the operation. On the day of his death, he drank by mistake a quantity of laudanum left as an external application, and which he took for brandy, but as soon as discovered by the house-surgeon, it was evacuated from his stomach by an effervescing dose of salærated and vinegar, and so far as could be perceived, produced no symptoms.

An examination of the body was made on the following day. Both lungs were found studded with large masses of cancerous matter, and were

adherent at certain points to the pleuræ. The liver at first appeared healthy, but on being cut into a number of cavities were discovered about the size of a filbert, containing a thick, milky fluid. On the spine, at the root of the mesentery, was a mass of enlarged lymphatic glands, the chain of them extended down from the edge of the rim of the pelvis nearly to the groin, much flattened, and not perceptible through the walls of the abdomen. The cord in the neighbourhood of the ring, just above the spot where the ligature had been applied, was in a gangrenous condition. The intestines being removed, exposed the following remarkable appearances in the pelvic organs: The bladder was somewhat distended, and just behind it lay a well-formed uterus of natural size, as in the unimpregnated state. On the left side of the uterus the Fallopian tube terminated in its fimbriated extremity, under which lay the ovary, rather smaller than natural, and with one or two little bands of adhesion running between it and the Fallopian tube. The ovary being incised displayed its ordinary structure. On the right side, the tube ran along under the peritoneum, turned upwards, and was lost in a diseased mass in the right groin. The parts were now removed with great care from the pelvis by Professor J. B. S. Jackson, who fortunately happened to be present with his class, and assisted at the examination.

All the pelvic organs being removed and placed on a table, we proceeded to investigate the relation of the different organs. A probe was passed into the urethra, and went readily into the bladder; being withdrawn and depressed a little, it passed with equal facility to the fundus of the uterus. The parts were now turned over, and the back of the vagina and uterus laid open. The vagina which commenced about an inch from the external orifice, was nearly four inches in length, and terminated in the os uteri, which, however, did not make much of a relief in the vagina, although the distinction in the two textures was fully marked. The arbor vitæ was very distinct and beautifully shown; it extended nearly up to the fundus of the uterus. The blowpipe being introduced into the left Fallopian tube, air passed freely through it and out of the fimbriated extremity. A probe could be passed for a certain distance freely into the right Fallopian tube, but air did not pass through it as in the other.

In regard to the tumour removed, the whole substance of it seemed to be converted into encephaloid matter, and its natural structure lost. The tunica vaginalis was adherent, except at its anterior part; it was cut into early in the operation, and about a gill of yellow-coloured serum escaped, exposing on the upper part of the organ a collection of most beautifully coloured cysts of all sizes, like a mass of most brilliant crystals.

It would have been extremely interesting in this case to have decided whether menstruation had ever taken place through the urethra, but this, unfortunately, I had no means of determining.

The organs being given to Dr. Hodges, the Demonstrator of anatomy to

the College, for the purpose of a more minute dissection and investigation, he has kindly furnished the following report:—

“*Pilous development* that of a male. *Penis*, which is that of an adult, and not of a youth, measures along its dorsum two and a half inches. The glans, of proportionate size, is covered, except in the immediate vicinity of where the frenum should be, by a well-developed prepuce. The urethra being cleft from the meatus backwards, the prepuce is not completed underneath, but becomes lost in the sheath of the penis.

The *urethra* is traceable, along the under surface of the penis, from the meatus  $3\frac{1}{4}$  inches, and disappears in an orifice  $2\frac{3}{16}$  inches in front of the anus. Throughout this distance it consists only of a fissure or sulcus, the sides of which having irregular borders are in apposition. It is lined with well characterized mucous membrane, and has at various points distinct lacunæ.

Diverging obliquely upwards and outwards from the sides of the urethra are folds of integument, constituting distinct *labia major* and *minora*. On the left, at the side of these labia, are indistinct marks of cicatrices.

Examined internally, the penis consists of two *corpora cavernosa*, measuring from the meatus to their bifurcation 4 inches. They terminate in well-marked crura, and the nerves, arteries, and veins of the dorsum of the penis have the usual size and position. The *corpus spongiosum* is well developed, but split longitudinally into two halves, which are to be seen on either side of and behind the corpora cavernosa, and correspond externally to two folds which form the labia minora.

*Cowper's glands* were not found.

The muscles of the perineum were somewhat confused, but the following were distinctly made out: *erectores penis*, *compressores urethræ*, *levator* and *sphincter ani*; anterior to the latter was another elliptical sphincter muscle, corresponding, probably, to the *sphincter vaginæ*. The *transversus perinei*, as such, was not made out.

The *bladder* is of ordinary size, but its muscular development is greater than usual. It has two *ureters*, normal as to their entrance and otherwise. From the internal orifice of the bladder to the “vagina urethralis” it is  $1\frac{1}{4}$  inch. Laid open along its anterior surface, its neck is embraced by a bi-lobed prostate gland of about half the natural adult dimensions; posteriorly to this the neck is thickened, and the section is as through a structure resembling the prostate. On squeezing the prostate, its secretion is seen to issue through several apertures on each side of the urethra, where the prostatic sinus usually exists. There is no verumontanum, but where it should be, and where the sinus pocularis would be found, the urethra and vagina blend, and a probe inserted and passed backwards enters the vagina; passed forwards, it appears externally at the orifice in front of the anus. Behind the bladder are found the uterus and vagina. On dissecting up the bladder from the vagina, as far down as the prostate, no *vesiculæ seminales* are to be found.

The uterus and vagina are  $5\frac{7}{8}$  inches in length. The uterus,  $2\frac{1}{2}$  inches long and  $1\frac{1}{16}$  inch wide at its widest part, consists of fundus, body, neck, and os. The neck has unusually well-marked arbor vitæ. Just within the os the mucous membrane appears abraded. The body has a triangular cavity, into which the Fallopian tubes enter by large orifices. The *vagina*,  $3\frac{3}{8}$  inches long and  $1\frac{1}{4}$  inch wide, is rugous, especially near its termination anteriorly, and has distinct columns. Anteriorly it contracts to terminate

in the canal common to it and the urethra, and at this point has a sufficiently well-marked hymen.

The Fallopian tube of the right side permits air to be blown through its whole length. Near its termination in a fimbriated extremity, it becomes a little convoluted and dilated. Its length is  $3\frac{7}{8}$  inches. At a distance of  $2\frac{1}{8}$  inches from the uterus, and in its usual position, is an *ovary* with a lobulated surface.

The broad ligament on each side exists as in an ordinary female uterus. On the left side the round ligament is to be seen diverging from the broad and pursuing, so far as traceable, the usual course which it would pursue under ordinary anatomical conditions. On the right side the Fallopian tube admits the passage of air only for a certain distance. Near the uterus it is of large size, but it soon diminishes and becomes smaller. It is traceable to the point at which the "cord" of the tumour was divided, and is accompanied by the round ligament in its whole distance, no appearance indicating the usual divergence of it from the Fallopian tube on the anterior surface of the broad ligament. No ovary is found on this side.

The *rectum* lies behind the uterus, and is in all respects normal.

Dr. Ellis, Microscopist to the hospital, gives us the following results of his investigation.

Examined with the microscope the breasts were found to be composed of fibrous tissue, and a few small nuclei. No lobules were seen.

The mass removed before death consisted of two parts, the largest of which was rounded and solid; the other was composed of cysts. The former was  $4\frac{1}{2}$  inches long,  $3\frac{1}{2}$  wide, and  $2\frac{1}{2}$  thick; the latter two or three inches in diameter. On close examination, nothing like a vas deferens could be found, but at one part were a number of parallel bloodvessels.

*Remarks.*—The internal organs in the case we have been considering seem evidently to belong to the female sex with the exception of the prostate gland. The importance of this as connected with the male sexual organs has diminished in the eyes of distinguished philosophical anatomists who have lately written on the subject, being considered as much an appendage to the urinary organs as to the sexual. We, therefore, with some difficulty account for the impetus given to the external male organization, beard, larynx, penis, and general masculine formation of the body; and the views we have entertained in regard to the effect of the sexual organs on the external character, seem to be very much disturbed by the present case. It might be very interesting to trace the analogies between different organs in the male and female systems, which are suggested in this instance, but we will refer to the very thorough and interesting paper of the distinguished Professor Simpson, of Edinburgh, on hermaphrodism, in the second volume of his obstetric works, edited by Dr. Priestly, of Edinburgh, and our talented townsman, Dr. Horatio R. Storer, where this whole subject has been most fully elaborated, and we may almost say exhausted.

The drawings which illustrate this case were originally made of the natural size of the parts, by Dr. L. Manlius Sargent, so distinguished for the accuracy of his delineations of anatomical specimens, and could they be

exactly copied would answer fully as well as an actual inspection of the parts.

It may not be considered inappropriate to append to this case the following, reported by me to the Boston Society for Medical Improvement, in May, 1857, and extracted from their records :—

“The subject of this very uncommon deviation from nature, was 25 years of age, born in Maine, of healthy parents. He was by occupation a sailor; and the appearances to be described were only discovered when brought to the prison, where, on being undressed to put on the prison clothes, he was thought, from the large size of the breasts, to be a female in disguise, and was, therefore, transferred to the surgeon of the institution, Dr. Morris, for examination. On my visit to his cell, he seemed to have no objection to having an examination made, when it was explained to him that it was for a scientific object.

“Beginning with the face, the features are soft, and the expression mild; there is no beard. The neck is of medium size and length, but rising toward the back, as in the female. The shoulders are sloping, round and smooth, the muscles not being prominent. The upper extremities are delicate, and the hands small. The breasts, which are the most striking feature in this person, are large, well developed even for a female, quite handsomely formed, with large blue veins running over them, as in a nursing woman; the nipples being large, with a large, dark areola. The abdomen is quite prominent; the navel deep; the hips very broad, as in the female. There is a small penis. The scrotum and testicles are very small, the size of the latter being that of a bean. The legs are short, the middle of the body being, by measurement, half way between the umbilicus and the pelvis, instead of being, as in the male, at the pubic region. The voice is masculine; the sexual propensities normal.

“The interesting and remarkable feature of this case is the fact of the small male organs of generation implanted on a body almost entirely female. Cases constantly present themselves to the observation of medical men of malformed genital organs, having the appearance of a combination of the male and female; also of men with a large mammary organ. In this case there can be said to be no malformation.”

#### EXPLANATION OF PLATE.

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| A. Right corpus cavernosum penis.  | B. Crura penis.          |
| C. Skin where it turns up over pubes.  | D. Glans penis.          |
| E. Distal extremity, or commencement of hypospadias.   | F. Triple row of nymphæ. |
| G. A bristle inclining forwards, passing through the aperture at the proximate extremity of the hypospadias, and then coming out in the urethra directly in front of prostate gland. |                          |
| H. A bristle passing in at the same orifice, and coming out at the entrance of vagina close to the hymen.  |                          |
| I. Hymen.  |                          |
| J. Vagina slit open posteriorly, showing longitudinal and transverse rugæ.   |                          |
| K. Neck of uterus, showing the arbor vitæ.   |                          |
| L. Fimbriated extremity of left Fallopian tube.  | M. Left ovary.           |
| N. Diseased mass on right side, corresponding with left ovary and Fallopian tube.  |                          |
| O. Right Fallopian tube, partly impervious.  |                          |
| P. Left Fallopian tube, at the beginning of its trumpet-shaped extremity.  |                          |
| Q. Prostate gland.   | R. Uterus.               |
|  | S. Bladder with ureters. |

